S1: **ARDUINO TEMPERATURE MONITORING AND FAN/BULB CONTROL PROJECT**

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COURSE:MC-547 (MSD)

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INTRODUCTION TO THE PROJECT

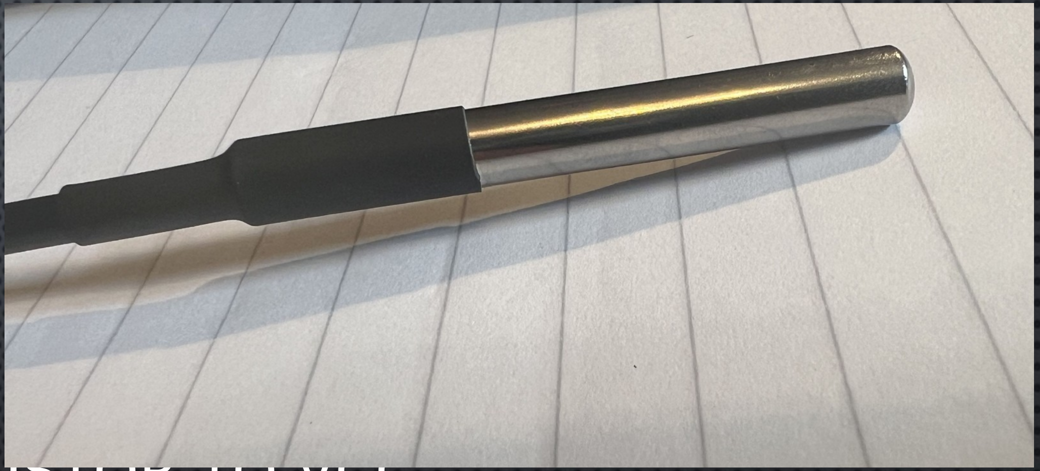
Motor module

I2C LCD Display

- **OBJECTIVE**:
- **COMPONENTS USED**:
- **BRIEF OVERVIEW**

DS18B20 Temperature Sensor

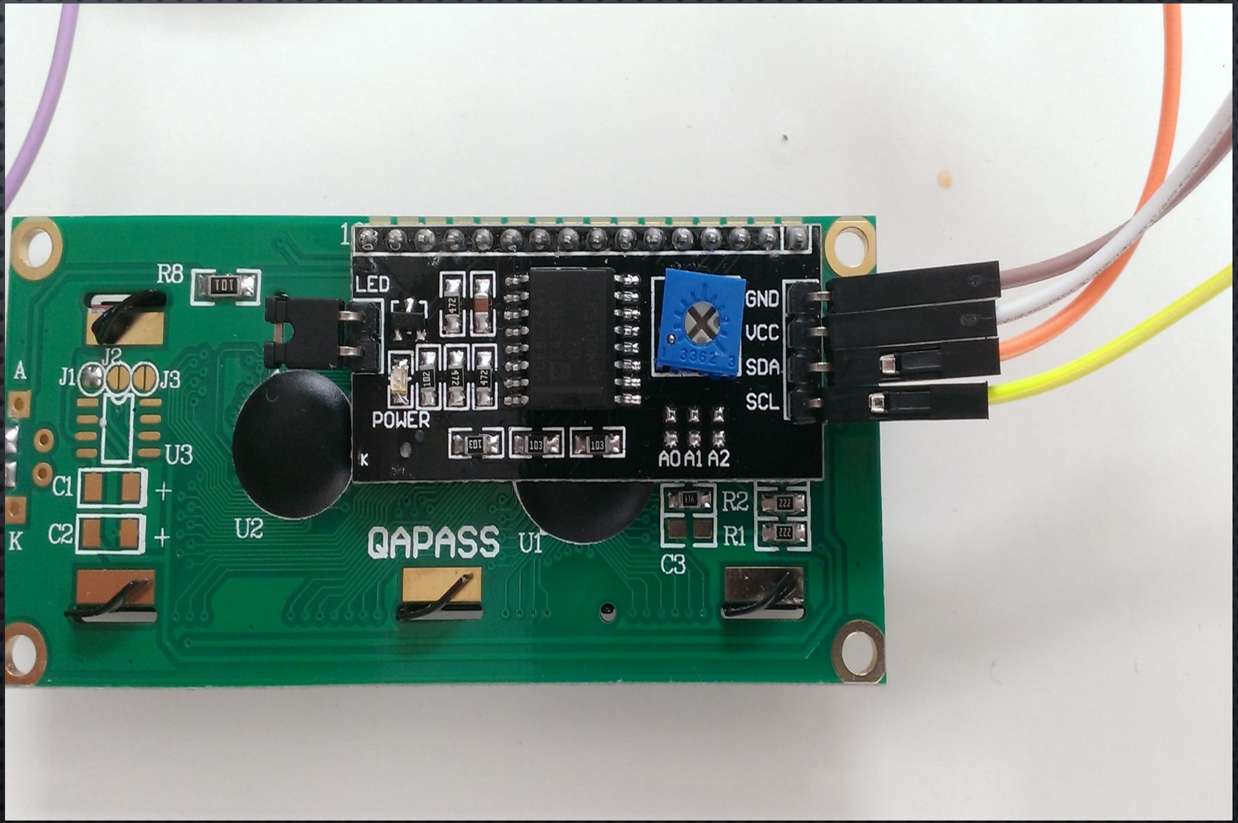
S3:TEMPERATURE SENSOR SETUP



- **CONNECTION DETAILS**:
    - VCC TO 5V ON ARDUINO
    - GND TO GROUND
    - DATA TO PIN 7 WITH A 4.7K OHM RESISTOR TO VCC
- **PURPOSE**: DISCUSS HOW THE DS18B20 MEASURES TEMPERATURE AND COMMUNICATES VIA ONEWIRE PROTOCOL.

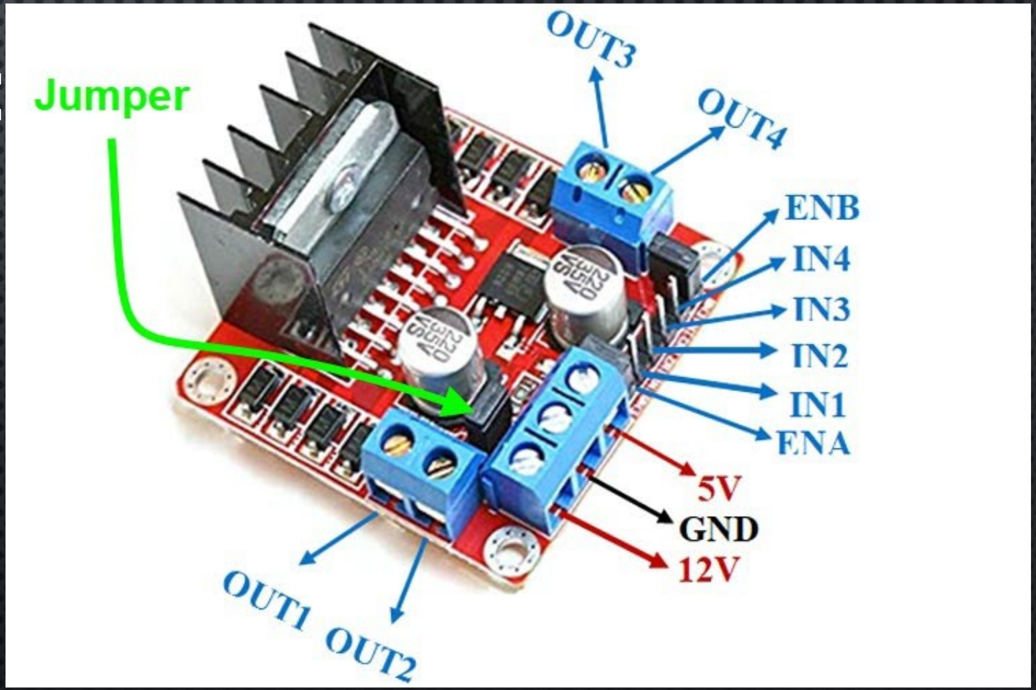
S4:I2C LCD DISPLAY CONFIGURATION

- **CONNECTION DETAILS**:
  - VCC TO 5V
  - GND TO GROUND
  - SDA TO A4
  - SCL TO A5
- **FUNCTIONALITY**: EXPLAIN HOW THE LCD DISPLAYS TEMPERATURE READINGS AND FAN STATUS.



S5: MOTOR/FAN CONTROL

- **CONNECTION DETAILS:**
  - M1 TO PIN 4
  - M2 TO PIN 5
  - MS (PWM) TO PIN 3
- **CONTROL LOGIC**



S6: SOFTWARE OVERVIEW

- **CODE SNIPPETS**
- **LIBRARIES USED**:
  - ONEWIRE
  - DALLASTEMPERATURE
  - LIQUIDCRYSTAL_I2C
- **MAIN LOOP**: THE ARDUINO CONTINUOUSLY CHECKS THE TEMPERATURE AND ADJUSTS THE FAN SPEED.

S7: CHALLENGES AND SOLUTIONS

- CHALLENGES FACED DURING THE PROJECT SETUP.
- SOLUTIONS IMPLEMENTED TO OVERCOME THESE CHALLENGES.
- TIPS FOR SUCCESSFUL PROJECT IMPLEMENTATION.

S8: CONCLUSION

- **PROJECT IMPACT**: BENEFITS OF THE TEMPERATURE MONITORING AND FAN CONTROL SYSTEM.
- **FUTURE ENHANCEMENTS**: POTENTIAL IMPROVEMENTS OR ADDITIONS TO THE PROJECT.
- **Q&A**: INVITE QUESTIONS FROM THE AUDIENCE.

S9: REFERENCES

- SOURCES OF INFORMATION, LIBRARIES, AND DATASHEETS USED IN THE PROJECT.